



RECEIVED

JAN 06 1993

RCOM SECTION

December 31, 1992

Regional Administrator
USEPA Region VII
726 Minnesota Avenue
Kansas City, KS 66101

ATTN: Mr. Gene Evans

RE: Quarterly Progress Report, Partial Facility Closure and
Corrective Action, Safety-Kleen Corp. Branch Service
Center, Wichita, Kansas (KSD000809723)

Dear Mr. Evans:

This quarterly progress report is being submitted to comply with reporting requirements in Section 4 of Part II, the Hazardous and Solid Waste Amendments (HSWA) Permit and on pages VI-28, VI-29, and VII-8 of the approved Partial Facility Closure Plan. The conditions of the HSWA permit are addressed in modifications to the RCRA Interim Status Partial Facility Closure Plan, which has been reviewed and approved by the Kansas Department of Health and Environment (KDHE). This quarterly report covers the period from October 1, 1992 to December 31, 1992.

Work Completed During Reporting Period

1. S-K conducted a quarterly ground-water quality monitoring event in November 1992. S-K measured fluid levels and collected samples for laboratory analysis from five monitoring wells (A-1 to A-5). Field blank and equipment blank samples were submitted to the laboratory for QA/QC. The results of the monitoring event are presented in Attachment A.
2. A full-scale soil vapor extraction system (SVES) has operated continuously since commencing operation on October 27, 1991, with the exception of periodic shutdowns for maintenance and performance testing.
 - a. S-K monitors the operation of the SVES on a daily basis. The latest operating records are presented in

Mr. Gene Evans
December 31, 1992
Page 2

Attachment B. The operational data recorded during this reporting period indicate continued steady-state operation of the SVES.

- b. S-K conducted quarterly monitoring of the SVES during the week of November 16, 1992. S-K measured vapor extraction wellhead vacuums and monitored the vapor emissions from the system to evaluate the performance of the SVES. A vapor sample was collected from the SVES emissions on November 17, 1992, and submitted to a qualified laboratory for analysis. The analytical results are presented in Attachment C.
- c. S-K performed quarterly maintenance on the SVES in November 1992. The water knock-out container and condensate sump were drained/bailed and visually inspected. S-K lubricated the exhauster bearings and replaced the belt which powers the exhauster.
- d. On November 24, 1992, S-K personnel noticed air flowing in through a crack in a joint of the concrete pavement near VE-2. S-K anticipates that the joint in the concrete pavement expanded because of the colder ambient temperatures and allowed for a migration route for the induced air flow. The crack was subsequently sealed on November 30 to prevent short circuiting of subsurface air flow.
- e. In accordance with the KDHE-approved Partial Facility Closure Plan, S-K conducted a semiannual shallow soil gas survey to evaluate the performance of the SVES. The specific objectives of this performance evaluation were to:
 - Establish data to allow S-K to evaluate the progress of SVES operation toward remediation.
 - Determine regions within the area of subsurface degradation to be targeted with the SVES.

The primary components of the shallow soil gas survey are summarized below.

- SVES Shutdown. The SVES was shut down for a period of 43 hours to allow hydrocarbon vapors in the subsurface to diffuse throughout the soils and reach an equilibrated condition. At the end of this period, S-K commenced with the soil gas survey on November 19, 1992.

Mr. Gene Evans
December 31, 1992
Page 3

- Sampling Locations. Soil gas measurements were collected at 19 testholes located at the nodes of an approximate 25 x 25 foot grid pattern. The testholes were sited near the locations sampled during the May 1992 soil gas survey.
 - Sample Collection. Samples of soil gas were obtained from testholes drilled to approximately two feet below grade. A hammer drill and 2 foot x 1 inch diameter bit were used to bore the testholes. A sampling probe fitted with a top-sealing device was lowered to the bottom of each hole (see Figure C-2).
 - Field Screening. Soil gas at each testhole, was monitored for organic vapor (OV) with a photo-ionization detector (PID). The PID was calibrated to isobutylene units (IU) using a 100 ppm isobutylene standard. Soil gas from downhole was drawn into the PID and the highest reading was recorded. The results of the shallow soil gas survey are summarized on Figure C-3 of Attachment C.
- f. In general, the results of the shallow soil gas survey indicated significantly lower OV concentrations than were observed during the May 1992 survey.
- g. No other modifications were made to the SVES during this reporting period.
3. S-K has negotiated with the adjacent landowner (immediately south of the site) to obtain an access agreement for the purpose of installing offsite ground-water monitoring wells. S-K plans to commence with installation of the offsite well(s) and additional assessment activities in January or February 1993.
4. S-K is working with KDHE to develop a mutually acceptable plan for completely defining the horizontal and vertical extent of ground-water degradation.
5. S-K met with KDHE on May 26, 1992, to discuss the status of the closure project. The following comments summarize the results of the meeting:
- S-K feels the clean closure levels should be site specific and that the health-based risk assessment thoroughly evaluates site conditions.

Mr. Gene Evans
December 31, 1992
Page 4

- Data indicates the soil venting system is effectively remediation subsurface degradation.
 - KDHE expressed concern about the elevated chromium concentrations which have been measured in ground-water samples from Well A-1 (up-gradient).
6. S-K completed a site-specific health-based risk assessment to establish closure performance standards at the site. A draft copy of the risk assessment was submitted to USEPA and KDHE during a meeting on January 14, 1992. S-K plans to finalize the risk assessment per any comments received from the agencies in the future.

Summaries of Findings

1. Water levels measured on November 18, 1992, confirm a southeasterly ground-water flow direction. Ground-water samples collected during the November 1992 quarterly monitoring event were analyzed by GTEL Laboratories, Wichita, Kansas. The ground-water quality monitoring results and laboratory data sheets are presented in Attachment A.
 - a. One organic constituent was detected in the up-gradient Well A-1 during the November 1992 monitoring event. Carbon disulfide was reported at a concentration of 0.023 mg/L. Carbon disulfide is not a constituent typically associated with S-K operations.
 - b. Organic constituents were present in November 1992 samples from down-gradient wells A-2, A-3, and A-4. The detected VOCs included mineral spirits, 1,2-dichloroethene (total), 1,1,1-trichloroethane, ethylbenzene, xylenes (total), 1,2-dichlorobenzene, 1,4-dichlorobenzene, and chlorobenzene.
 - c. Organic constituents were not detected in the November 1992 ground-water sample from Well A-5. In addition, 1,1-dichloroethane, 1,2-dichloroethane, 1,1,1-trichloroethane, and toluene were not detected in any of the samples collected from the monitoring wells during November 1992.
 - d. No volatile organic compounds detected during the November 1992 sampling event were measured at concen-

Mr. Gene Evans
December 31, 1992
Page 5

trations which exceeded the November 1992 published USEPA maximum contaminant levels (MCL).

- e. Mineral spirits was detected in wells A-2, A-3, and A-4 at concentrations ranging from 0.460 to 5.2 mg/L. These mineral spirits concentrations are consistent with those from the previous monitoring period (August 1992).
 - f. Total chromium was detected in the November 1992 sample from up-gradient Well A-1 at a concentration of 0.033 mg/L. The consistent occurrence of chromium in the up-gradient Well A-1 and non-occurrence in the down-gradient wells indicate that chromium is most likely non-facility related. It is noteworthy that the level of chromium in Well A-1 is less than the MCL (0.100 mg/L).
 - g. Total cadmium and total lead were not detected in the November 1992 samples from any of the monitoring wells. During the August 1992 ground-water monitoring event, cadmium was detected in samples from the wells and field blanks. As stated in the previous report (September 30, 1992), S-K believed that the detection of cadmium in the ground-water samples was an anomalous condition (i.e., possibly lab-related).
- 2. A measurable product thickness was not detected in any of the wells during the November 1992 monitoring event.
 - 3. S-K performed quarterly monitoring of the SVES on November 17, 1992.
 - a. As of the November 1992 monitoring event, the operation of the SVES had generally stabilized. S-K noticed a slight, but gradual decrease in the inlet temperature of the system and increase in the inlet vacuum; these variations are most likely due to decreasing ambient air temperatures. The total system flow averaged 390 scfm during the November 1992 monitoring event.
 - b. S-K monitored vapor extraction wellhead vacuums during the November 1992 monitoring event. The wellhead vacuums at wells VE-2, VE-3, and VE-4 had stabilized at approximately 34 inches, 34 inches, and 35 inches of water column, respectively. Vapor extraction well VE-1 has been shut off since the January 1992 event and therefore was not measured. The wellhead vacuums

were consistent with those measured during the August 1992 event.

- c. The results of the vapor sampling and analysis data collected to date are summarized in Attachment C. Based on the results of the latest quarterly monitoring event (November 1992), the SVES removal rate has decreased to approximately 0.01 pounds per hour. Based on the emissions data, S-K has estimated that approximately 1,820 pounds of VOCs have been removed from the subsurface as of November 17, 1992. S-K intends to collect the next quarterly vapor sample for laboratory analysis in January or February 1993.
- d. Based on the SVES vapor emissions, S-K has documented that at least 1,820 pounds of VOCs have been removed. Recent SVES studies have indicated that 50 to 80% of the treatment system performance is due to enhanced bioremediation which results from increased oxygen concentrations in the soils. Therefore, the SVES has most likely removed/treated a greater quantity of organics than measured in the emissions.
- e. A shallow soil gas survey was conducted following the November 1992 SVES monitoring event. The results of the survey are presented in Appendix C and indicate that the greatest elevated OV concentrations are in the vicinity of VE-4. All OV concentrations measured in the soil gas were less than 50 IU, except at one location. The OV concentrations ranged from 0 to 161 IU during the November 1992 survey.
- f. S-K restarted the SVES upon completion of the soil gas survey and collected another vapor sample for laboratory analysis. This second sample described initial vapor concentrations in the SVES emissions following the three-day shut down period. The laboratory report for this second sample analysis is included in Attachment C. Note that mineral spirits was detected at a concentration of 12 mg/kg which exceeds the results of the first sample (5 mg/kg).
- g. S-K plans to use the results of the semiannual soil gas surveys to assist in estimating the progress of remediation by the SVES. The results of the previous soil gas surveys will be compared to data generated during the next semiannual soil gas survey (April or May 1993).

Mr. Gene Evans
December 31, 1992
Page 7

Summaries of Problems

1. Additional monitoring wells will be installed offsite to identify the extent of ground-water quality degradation. S-K has negotiated an agreement with the adjacent property owner, and plans to install these offsite wells in January or February 1993.
2. The protective casings of two ground-water monitoring wells (wells A-1 and A-5) have been damaged/disturbed by previous activities at the site. S-K is coordinating with a drilling contractor to repair the wellheads and protective casings.
3. During this quarterly reporting period, S-K has noticed a decline in the SVES removal rate (from 0.02 pounds VOCs per hour to 0.01 pounds per hour). Based on the results of quarterly monitoring activities, S-K may investigate options for modifying system operation (i.e., intermittent operation, ground-water sparging, etc.) to enhance removal efficiency.
4. As previously discussed, S-K noticed cracks in the concrete pavement in the vicinity of VE-2. The cracks were sealed to prevent short circuiting of subsurface air flow.

Projected Work for Next Reporting Period

1. S-K will continue with implementation of closure and remediation activities in accordance with the approved Closure Plan. Activities scheduled during the next quarter include:
 - a. Quarterly monitoring of the performance and operation of the soil venting system (next monitoring event scheduled for January or February 1993);
 - b. Conducting the next quarterly ground-water monitoring event scheduled for January or February 1993.
2. S-K will complete the health-based risk assessment following review by the agencies and continue working the KDHE and USEPA to develop acceptable closure objectives during the remediation program.

Mr. Gene Evans
December 31, 1992
Page 8

3. S-K will coordinate the installation of additional monitoring wells to define the southeasterly extent of subsurface degradation. The additional offsite monitoring wells will be incorporated into the ongoing monitoring program.
4. S-K intends to design an appropriate ground-water remediation program to achieve clean closure. S-K will work with KDHE and USEPA to implement an effective ground-water remediation program following definition of the extent of impacts.
5. S-K will submit the next quarterly progress report on or by March 31, 1993.

S-K appreciates the cooperation and assistance which USEPA and KDHE have provided on this closure project. If you have any questions, please feel free to contact me at (713) 280-9754.

Sincerely,
SAFETY-KLEEN CORP.

Joe Herrin JH
Joe Herrin
Senior Project Manager - Remediation

JH:TM/560

cc: Siew Kour - KDHE
Gary Long - Safety-Kleen Corp.
Scott Hesseltine - Safety-Kleen Corp.
TriHydro Corporation

ATTACHMENT A

GROUND-WATER QUALITY DATA
PARTIAL FACILITY CLOSURE
SAFETY-KLEEN CORP.
WICHITA, KANSAS

Table A-1. Monitoring Well Completion Summary, Safety-Kleen Corp. Branch Service Center, Wichita, Kansas.

Well	Date of Measurement	Approximate Grade Eley. (ft-datum) ¹	Measuring Point Elevation (ft-datum) ¹	Total Depth Cased (ft-bgs) ²	Casing Diameter (in)	Casing Type	Elevation Screened Interval (ft-datum) ¹	Depth to Hydro-carbon (ft-bmp) ³	Gauged Depth to Water (ft-bmp) ³	Hydro-carbon Thickness (ft)	Corrected Static Water Elevation (ft-datum) ¹	Total Depth Measured (ft-bmp) ³
A-1	10-19-89	100.5	100.48	17.5	4	PVC	83.5-93.5	--	11.18	--	89.30	17.5
	11-16-89						--	11.33	--		89.25	--
	06-07-90						--	11.39	--		89.09	--
	07-18-91						--	12.66	--		87.82	--
	10-14-91						--	12.38	--		88.10	17.5
	01-15-92						--	12.39	--		88.09	17.0
	05-20-92						--	12.07	--		88.41	--
	08-25-92						--	11.77	--		88.71	--
	11-18-92						--	11.76	--		88.72	17.0
A-2	10-19-89	100.7	100.71	19.5	4	PVC	81.7-91.7	--	11.59	--	89.12	19.5
	11-16-89						--	12.23	--		88.96	--
	06-07-90						--	11.81	--		88.90	--
	07-18-91						--	13.09	--		87.62	19.15
	10-14-91						--	12.83	--		87.88	19.5
	01-15-92						--	12.79	--		87.92	19.10
	05-20-92						--	12.49	--		88.22	--
	08-25-92						--	12.18	--		88.53	--
	11-18-92						--	12.19	--		88.52	19.0
A-3	10-19-89	101.2	101.22	18.5	4	PVC	83.2-93.2	--	12.75	--	88.47	18.5
	11-16-89						--	12.25	--		88.97	--
	06-07-90						--	12.27	--		88.95	--
	07-18-91						--	13.59	--		87.63	17.84
	10-14-91						--	13.32	--		87.90	18.5
	01-15-92						--	13.28	--		87.94	17.8
	05-20-92						--	12.98	--		88.24	--
	08-25-92						--	12.66	--		88.56	--
	11-18-92						--	12.68	--		88.54	18.0
A-4	10-19-89	101.3	101.25	18.5	4	PVC	83.3-93.3	--	12.80	--	88.45	18.5
	11-16-89						--	11.75	--		89.02	--
	06-07-90						--	12.28	--		88.97	--
	07-18-91						--	13.30	14.59	1.29	87.67	17.85
	10-14-91						--	13.25	13.65	0.40	87.91	18.5
	01-15-92						--	13.27	--		87.98	17.8
	05-20-92						--	12.98	--		88.27	--
	08-25-92						--	12.67	--		88.58	--
	11-18-92						--	12.68	--		88.57	18.0

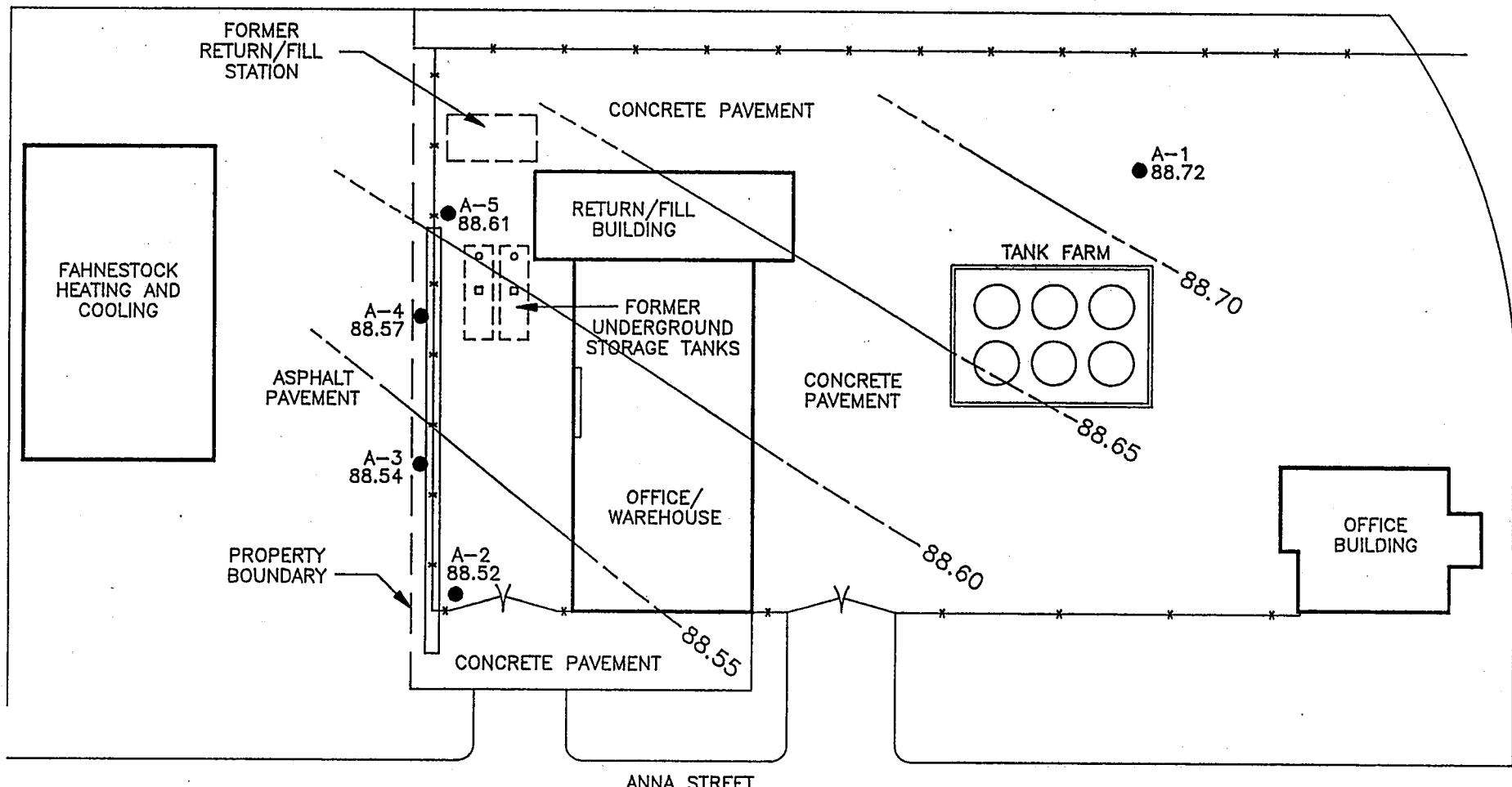
Table A-1. Monitoring Well Completion Summary, Safety-Kleen Corp. Branch Service Center, Wichita, Kansas (continued).

Well	Date of Measurement	Approximate Grade Eley. (ft-datum) ¹	Measuring Point Elevation (ft-bgs) ²	Total Depth Cased (ft-bgs) ²	Casing Diameter (in)	Casing Type	Elevation Screened Interval (ft-datum) ¹	Depth to Hydro-carbon (ft-bmp) ³	Gauged Depth to Water (ft-bmp) ³	Hydro-carbon Thickness (ft)	Corrected Static Water Elevation, (ft-datum) ¹	Total Depth Measured (ft-bmp) ³
A-5	10-19-89	--	--	--	--	--	--	--	--	--	--	--
	07-18-91	101.8	101.77	19.7	4	PVC	82.4-92.4	--	14.04	--	87.73	19.40
	10-14-91						--	13.80	--	--	87.97	19.0
	01-15-95						--	13.73	--	--	88.04	19.40
	05-20-92						--	13.46	--	--	88.31	--
	08-25-92						--	13.10	--	--	88.67	--
	11-18-92						--	13.16	--	--	88.61	19.5

Notes: ¹ Datum is an assigned elevation of 100 feet for the top of the casing of the existing water well on the Safety-Kleen site.

² bgs = below ground surface

³ bmp = below measuring point



EXPLANATION

0 40 ft.
SCALE

- A-2
88.52 ● EXISTING MONITORING WELL LOCATION AND
STATIC WATER ELEVATION (ft.-datum)
- 88.60 — LINE OF EQUAL ELEVATION OF POTENTIOMETRIC
SURFACE (ft.-datum)

FIGURE A-1 : GROUND-WATER MONITORING WELL NETWORK AND POTENTIOMETRIC SURFACE ELEVATIONS,
SAFETY-KLEEN CORP. SERVICE CENTER, WICHITA, KANSAS (November 1992)

Table A-2. Ground-Water Quality, Field Measurements and Observations, Safety-Kleen Corp. Branch Service Center, Wichita, Kansas.

Well	Sampling Date	Temperature (°C)	pH (std. units)	Specific Conductance (μhos/cm @ 25°C)	Field Observations
A-1	10-19-89	15.2	7.61	510	Slight turbidity, light gray to brown
	07-18-91	20.5	6.97	680	Slight turbidity, tan silts, no hydrocarbon sheen
	10-14-91	18.1	7.44	1,180	Moderate turbidity, brown silt
	01-15-92	11.8	7.68	460	Moderate turbidity, tan silt
	05-20-92	16.4	7.10	736	Slight turbidity, gray silts, no sheen
	08-25-92	21.1	6.78	842	Clear, no turbidity, no sheen
	11-18-92	17.4	7.1*	800	Slight turbidity, gray silts, no sheen
A-2	10-19-89	15.6	7.15	865	Slight turbidity, light brown
	07-18-91	19.5	7.13	760	Very slight turbidity, tan silts
	10-14-91	19.8	7.08	840	Slight turbidity, light brown silt
	01-15-92	11.1	7.62	635	Clear, tan silt
	05-20-92	17.9	7.24	715	Clear, no turbidity, no sheen
	08-25-92	21.6	6.87	721	Very slight turbidity, tan silts, no sheen
	11-18-92	18.7	7.0*	678	Clear, no turbidity, no sheen
A-3	10-19-89	16.9	7.34	884	Slight turbidity, gray/brown color
	07-18-91	19.6	7.23	780	Sight turbidity, gray silts, no hydrocarbon sheen
	10-14-91	21.0	6.84	968	Moderate turbidity, gray silts
	01-15-92	9.9	7.54	651	Slight turbidity, gray silt
	05-20-92	18.3	7.48	305	Slight to moderate turbidity, tan silts, no sheen
	08-25-92	22.0	6.71	768	Clear, no turbidity, no sheen
	11-18-92	18.6	7.0*	734	Slight turbidity, gray silts, no sheen
A-4	10-19-89	16.2	7.31	915	Slight turbidity, brown silt, sparse ribbons of hydrocarbon sheen
	07-18-91	19.7	7.30	790	Slight turbidity, tan silts, red flocs, hydrocarbon sheen
	10-14-91	20.2	6.85	925	Slight turbidity, light gray tint, hydrocarbon sheen
	01-15-92	11.2	7.42	692	Very slight turbidity, tan, slit, sparse ribbons of hydrocarbon sheen
	05-20-92	18.4	7.10	645	Very slight to no turbidity, tan silts, sparse ribbons of hydrocarbon sheen
	08-25-92	22.8	6.68	623	Clear, very light green tint, suspended black particles, very sparse ribbons hydrocarbon sheen
	11-18-92	19.0	6.8*	654	Slight turbidity, tan silts, black flocs, hydrocarbon sheen
A-5	10-19-89	--	--	--	--
	07-18-91	19.1	7.20	830	Slight turbidity, gray silts, no hydrocarbon sheen
	10-14-91	19.6	7.07	921	Moderate turbidity, grayish brown silt, no sheen
	01-15-92	10.6	7.78	539	Very slight turbidity, tan silt
	05-20-92	17.5	7.19	608	Slight turbidity, gray silts, no sheen
	08-25-92	21.5	6.92	530	Very slight turbidity, gray silts, no sheen
	11-18-92	18.0	6.9*	671	Slight turbidity, tan silts, no sheen

Table A-2. Ground-Water Quality, Field Measurements and Observations, Safety-Kleen Corp. Branch Service Center, Wichita, Kansas (continued).

Well	Sampling Date	Temperature (°C)	pH (std. units)	Specific Conductance (μmhos/cm @ 25°C)	Field Observations
TAP	10-19-89	17.1	7.86	694	Clean

* Due to field instrument malfunction, pH was measured in the laboratory within 24 hours of sample collection.

Table A-3. Summary of Ground-Water Quality Data, Organic Constituents, Safety-Kleen Corp. Branch Center, Wichita, Kansas.

Volatile Organic Constituents (mg/L)														
Well	Sampling Date	Mineral Spirits	Carbon Disulfide	1,1-Dichloroethane	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,1,1-Trichloroethane	Toluene	Ethylbenzene	Xylenes (total)	1,2-Dichlorobenzene	1,2-Dichlorobenzene	Chlorobenzene	All Others
A-1	10-19-89	ND(0.05)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	--	--	ND(0.005)	ND
	7-18-91	ND(0.09)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	10-14-91	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	01-15-92	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	05-20-92	ND(0.090)	0.006	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	08-25-92	ND(0.090)	0.008	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	11-18-92	ND(0.090)	0.023	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
A-2	10-19-89	ND(0.05)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	--	--	ND(0.005)	ND
	7-18-91	ND(0.09)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	10-14-91	ND(0.200)	ND(0.005)	ND(0.005)	ND(0.005)	0.008	ND(0.005)	ND(0.005)	ND(0.005)	0.011	0.007	ND(0.005)	ND(0.005)	ND
	01-15-92	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	0.014	ND(0.005)	ND(0.005)	ND(0.005)	0.009	0.012	0.005	ND(0.005)	ND
	05-20-92	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.0089	0.0099	ND(0.005)	ND(0.005)	ND
	08-25-92	1.10	ND(0.005)	ND(0.005)	ND(0.005)	0.016	ND(0.005)	ND(0.005)	ND(0.005)	0.024	0.016	0.007	ND(0.005)	ND
	11-18-92	0.460	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.018	0.0088	0.0055	0.0056	ND
A-3	10-19-89	ND(0.05)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	--	--	ND(0.005)	ND
	7-18-91	0.120	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.006	ND(0.005)	ND(0.005)	ND
	10-14-91	ND(0.500)	ND(0.005)	ND(0.005)	0.007	0.013	ND(0.005)	ND(0.005)	0.013	0.028	0.028	0.011	ND(0.005)	ND
	01-15-92	ND(0.500)	0.009	ND(0.005)	ND(0.005)	0.005	ND(0.005)	ND(0.005)	ND(0.005)	0.018	0.012	ND(0.005)	ND(0.005)	ND
	05-20-92	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	08-25-92	1.50	0.014	0.006	ND(0.005)	0.024	ND(0.005)	0.008	0.015	0.074	0.037	0.014	ND(0.005)	ND
	11-18-92	0.640	ND(0.005)	ND(0.005)	ND(0.005)	0.0060	ND(0.005)	ND(0.005)	0.0059	0.027	0.011	0.007	0.0059	ND
A-4	10-19-89	ND(0.05)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	7-18-91	150	ND(0.005)	ND(0.005)	ND(0.005)	0.020	0.008	0.045	0.032	0.250	0.046	0.017	ND(0.005)	ND
	10-14-91	600	ND(0.010)	ND(0.010)	ND(0.010)	0.013	ND(0.010)	0.041	0.060	0.450	0.083	0.036	ND(0.005)	ND
	01-15-92	4.6	ND(0.005)	ND(0.005)	ND(0.005)	0.012	0.005	ND(0.005)	0.015	0.100	0.027	0.014	ND(0.005)	ND
	05-20-92	3.6	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.0064	ND(0.005)	0.019	0.059	0.036	0.015	ND(0.005)	ND
	08-25-92	5.0	ND(0.005)	0.005	ND(0.005)	0.014	ND(0.005)	ND(0.005)	0.030	0.130	0.044	0.020	ND(0.005)	ND
	11-18-92	5.2	ND(0.005)	ND(0.005)	ND(0.005)	0.0087	ND(0.005)	ND(0.005)	0.020	0.130	0.035	0.016	ND(0.005)	ND

Table A-3. Summary of Ground-Water Quality Data, Organic Constituents, Safety-Kleen Corp. Branch Center, Wichita, Kansas (continued).

Volatile Organic Constituents (mg/L)														
Well	Sampling Date	Mineral Spirits	Carbon Disulfide	1,1-Dichloroethane	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,1,1-Trichloroethane	Toluene	Ethyl-benzene	Xylenes (total)	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Chlorobenzene	All Others
A-5	10-19-89	--	--	--	--	--	--	--	--	--	--	--	--	ND
	7-18-91	ND(0.09)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	10-14-91	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	01-15-92	ND(0.090)	0.022	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	05-20-92	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	08-25-92	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
S-K Tap	11-18-92	ND(0.090)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND
	10-19-89	ND(50.0)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	--	--	--	--
KAL	--	--	--	0.005	0.005	0.070	0.200	2.0	0.680	0.440	0.620	0.075	0.060	--
MCL	--	--	--	--	0.005	0.07/0.10*	0.200	1.0	0.70	10.0	0.60	0.075	0.100**	--

ND = not detected above analytical limits in parentheses.

-- indicates sample not analyzed for constituent.

Samples collected in October 1989 were analyzed for 40 CFR 264 Appendix IX volatile and semi-volatile organic compounds (Well A-4 only). All ND.

Samples collected in July 1991, October 1991, and January 1992 were analyzed for mineral spirits by modified 8015 and volatile organic compounds by 8240 (SW-846).

Chromatographic data indicates the presence of non-target hydrocarbons that cannot be qualitatively identified as mineral spirits in wells A-2, A-3, and A-4.

KAL = Kansas Action Level (based on June 1988 published levels).

MCL = USEPA maximum contaminant level (based on November 1992 published levels).

Field and equipment blanks were prepared during the January 1992 monitoring event to verify QA/QC. None of the constituents analyzed for were detected in the blanks.

* USEPA MCL for cis-1,2-Dichloroethene and trans-1,2-Dichloroethene.

** Listed for monochlorobenzene, a synonym.

Table A-4. Summary of Ground-Water Quality Data, Inorganic Constituents, Safety-Kleen Corp. Branch Service Center, Wichita, Kansas.

Well	Sampling Date	Inorganic Constituents (mg/L)		
		Cadmium	Chromium	Lead
A-1	10-19-89	ND(0.01)	ND(0.04)	0.004
	7-18-91	ND(0.005)	0.060	ND(0.005)
	10-14-91	ND(0.005)	0.980	0.025
	01-15-92	ND(0.005)	0.230	0.008
	05-20-92	ND(0.005)	0.130	0.005
	08-25-92	0.008*	0.040	ND(0.005)
	11-18-92	ND(0.005)	0.033	ND(0.005)
A-2	10-19-89	ND(0.01)	ND(0.04)	ND(0.003)
	7-18-91	ND(0.005)	ND(0.010)	ND(0.005)
	10-14-91	ND(0.005)	ND(0.020)	0.007
	01-15-92	ND(0.005)	ND(0.010)	ND(0.005)
	05-20-92	ND(0.005)	ND(0.010)	ND(0.005)
	08-25-92	0.007*	ND(0.010)	ND(0.005)
	11-18-92	ND(0.005)	ND(0.010)	ND(0.005)
A-3	10-19-89	ND(0.01)	0.05	0.009
	7-18-91	ND(0.01)	0.016	ND(0.005)
	10-14-91	ND(0.005)	ND(0.020)	0.023
	01-15-92	ND(0.005)	ND(0.010)	ND(0.005)
	05-20-92	ND(0.005)	ND(0.010)	ND(0.005)
	08-25-92	0.007*	ND(0.010)	ND(0.005)
	11-18-92	ND(0.005)	ND(0.010)	ND(0.005)
A-4	10-19-89	ND(0.01)	ND(0.04)	0.014
	7-18-91	ND(0.005)	0.016	ND(0.005)
	10-14-91	ND(0.005)	ND(0.020)	0.150
	01-15-92	ND(0.005)	ND(0.010)	0.014
	05-20-92	ND(0.005)	ND(0.010)	0.006
	08-25-92	0.007*	ND(0.010)	0.005
	11-18-92	ND(0.005)	ND(0.010)	ND(0.005)
A-5	7-18-91	ND(0.005)	0.013	ND(0.005)
	10-14-91	ND(0.005)	0.027	0.034
	01-15-92	ND(0.005)	0.063	0.005
	05-20-92	ND(0.005)	0.017	ND(0.005)
	08-25-92	0.007*	ND(0.010)	ND(0.005)
	11-18-92	ND(0.005)	ND(0.010)	ND(0.005)
S-K Tap	10-19-89	ND(0.01)	ND(0.04)	ND(0.003)
KAL	--	0.005	0.050	0.050
MCL	--	0.005	0.10	0.015

* Constituent detected in both the equipment blank and field blank samples (reference laboratory data sheets)

ND = Not Detected above analytical detection limits in parentheses.

KAL = Kansas Action Level

MCL = USEPA Maximum Contaminant Level or Action Level



4560
D.L.

Project Number: TRI02.SFK01

560

UST

Closure/Assessment

Work Order Number: X2-11-397

Midwest Region

4211 May Avenue

Wichita, KS 67209

(316) 945-2624

(800) 633-7936

(316) 945-0506 (FAX)

DEC 04 1992

Jack Bedessem
TriHydro Corporation
920 Sheridan St.
Laramie, WY 82070

Dear Mr. Bedessem:

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories on 11-18-92 under chain-of-custody record 28787.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified by the State of Kansas under Certification #E-103 and #E-1113.

If you have any questions concerning this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

Ron Loucks / Extractables Mgr. 2

Terry R. Loucks
Laboratory Director

cc: Scott Davies
Safety Kleen
777 Big Timber Rd.
Elgin, IL 60123

Project Number: TRI02.SFK01
 560
 UST Closure/Assessment
 Work Order Number: X2-11-397
 Date Reported: 11-24-92

Table 1
ANALYTICAL RESULTS
Volatile Organics in Water
Modified EPA Method 8240a

GTEL Sample Number		01	02	03	04
Client Identification		A-1	A-2	A-3	A-4
Date Sampled		11-18-92	11-18-92	11-18-92	11-18-92
Date Analyzed		11-19-92	11-19-92	11-19-92	11-20-92
Analyte	PQL ug/L ^b	Concentration, ug/L ^c			
Chloromethane	10	<10	<10	<10	<10
Bromomethane	10	<10	<10	<10	<10
Vinyl Chloride	10	<10	<10	<10	<10
Chloroethane	10	<10	<10	<10	<10
Methylene Chloride	5	<5	<5	<5	<5
Acetone	100	<100	<100	<100	<100
Carbon Disulfide	5	23	<5	<5	<5
1,1-Dichloroethene	5	<5	<5	<5	<5
1,1-Dichloroethane	5	<5	<5	<5	<5
1,2-Dichloroethene (total)	5	<5	<5	6.0	8.7
Chloroform	5	<5	<5	<5	<5
1,2-Dichloroethane	5	<5	<5	<5	<5
2-Butanone	100	<100	<100	<100	<100
1,1,1-Trichloroethane	5	<5	<5	<5	<5
Carbon Tetrachloride	5	<5	<5	<5	<5
Vinyl Acetate	50	<50	<50	<50	<50
Bromodichloromethane	5	<5	<5	<5	<5
1,2-Dichloropropane	5	<5	<5	<5	<5
c/s-1,3-Dichloropropene	5	<5	<5	<5	<5
Trichloroethene	5	<5	<5	<5	<5
Dibromochloromethane	5	<5	<5	<5	<5

Table 1 continued on next page, footnotes at end of table

Project Number: TRI02.SFK01
 560
 UST Closure/Assessment
 Work Order Number: X2-11-397
 Date Reported: 11-24-92

Table 1 (continued)
ANALYTICAL RESULTS

Volatile Organics in Water
Modified EPA Method 8240^a

GTEL Sample Number		01	02	03	04
Client Identification		A-1	A-2	A-3	A-4
Date Sampled		11-18-92	11-18-92	11-18-92	11-18-92
Date Analyzed		11-19-92	11-19-92	11-19-92	11-20-92
Analyte	PQL ug/L ^b	Concentration, ug/L ^c			
1,1,2-Trichloroethane	5	<5	<5	<5	<5
Benzene	5	<5	<5	<5	<5
2-Chloroethylvinyl Ether	10	<10	<10	<10	<10
trans-1,3-Dichloropropene	5	<5	<5	<5	<5
Bromoform	5	<5	<5	<5	<5
4-Methyl-2-Pentanone	50	<50	<50	<50	<50
2-Hexanone	50	<50	<50	<50	<50
Tetrachloroethene	5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	5	<5	<5	<5	<5
Toluene	5	<5	<5	<5	<5
Chlorobenzene	5	<5	5.6	5.9	<5
Ethylbenzene	5	<5	<5	5.9	20
Styrene	5	<5	<5	<5	<5
Xylenes (total)	5	<5	18	27	130
1,2-Dichlorobenzene	5	<5	8.8	11	35
1,3-Dichlorobenzene	5	<5	<5	<5	<5
1,4-Dichlorobenzene	5	<5	5.5	7.0	16
PQL Multiplier ^e		1	1	1	1

Table 1 continued on next page, footnotes at end of table

Project Number: TRI02.SFK01
 560
 UST Closure/Assessment
 Work Order Number: X2-11-397
 Date Reported: 11-24-92

Table 1
ANALYTICAL RESULTS
Volatile Organics In Water
Modified EPA Method 8240^a

GTEL Sample Number	05	06	07	
Client Identification	A-5	EB 1118	FB 1118	
Date Sampled	11-18-92	11-18-92	11-18-92	
Date Analyzed	11-19-92	11-19-92	11-19-92	
Analyte	PQL ug/L ^b	Concentration, ug/L ^c		
Chloromethane	10	<10	<10	<10
Bromomethane	10	<10	<10	<10
Vinyl Chloride	10	<10	<10	<10
Chloroethane	10	<10	<10	<10
Methylene Chloride	5	<5	<5	<5
Acetone	100	<100	<100	<100
Carbon Disulfide	5	<5	<5	<5
1,1-Dichloroethene	5	<5	<5	<5
1,1-Dichloroethane	5	<5	<5	<5
1,2-Dichloroethene (total)	5	<5	<5	<5
Chloroform	5	<5	<5	<5
1,2-Dichloroethane	5	<5	<5	<5
2-Butanone	100	<100	<100	<100
1,1,1-Trichloroethane	5	<5	<5	<5
Carbon Tetrachloride	5	<5	<5	<5
Vinyl Acetate	50	<50	<50	<50
Bromodichloromethane	5	<5	<5	<5
1,2-Dichloropropane	5	<5	<5	<5
cis-1,3-Dichloropropene	5	<5	<5	<5
Trichloroethene	5	<5	<5	<5
Dibromochloromethane	5	<5	<5	<5

Table 1 continued on next page, footnotes at end of table

Project Number: TRI02.SFK01
 560
 UST Closure/Assessment
 Work Order Number: X2-11-397
 Date Reported: 11-24-92

Table 1 (continued)
ANALYTICAL RESULTS

Volatile Organics in Water
Modified EPA Method 8240a^a

GTEL Sample Number		05	06	07	
Client Identification		A-5	EB 1118	FB 1118	
Date Sampled		11-18-92	11-18-92	11-18-92	
Date Analyzed		11-19-92	11-19-92	11-19-92	
Analyte	PQL ug/L ^b	Concentration, ug/L ^c			
1,1,2-Trichloroethane	5	<5	<5	<5	
Benzene	5	<5	<5	<5	
2-Chloroethylvinyl Ether	10	<10	<10	<10	
trans-1,3-Dichloropropene	5	<5	<5	<5	
Bromoform	5	<5	<5	<5	
4-Methyl-2-Pentanone	50	<50	<50	<50	
2-Hexanone	50	<50	<50	<50	
Tetrachloroethene	5	<5	<5	<5	
1,1,2,2-Tetrachloroethane	5	<5	<5	<5	
Toluene	5	<5	<5	<5	
Chlorobenzene	5	<5	<5	<5	
Ethylbenzene	5	<5	<5	<5	
Styrene	5	<5	<5	<5	
Xylenes (total)	5	<5	<5	<5	
1,2-Dichlorobenzene	5	<5	<5	<5	
1,3-Dichlorobenzene	5	<5	<5	<5	
1,4-Dichlorobenzene	5	<5	<5	<5	
PQL Multiplier ^e		1	1	1	

Table 1 continued on next page, footnotes at end of table

Project Number: TRI02.SFK01
560
UST Closure/Assessment
Work Order Number: X2-11-397
Date Reported: 11-24-92

Footnotes to Table 1

ANALYTICAL RESULTS

**Volatile Organics in Water
EPA Method 8240a**

- a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; sample preparation per EPA Method 5030.
- b Practical quantitation limit.
- c Data Flag Definitions
 - B Indicates that the analyte was found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- e Indicates the adjustments made for sample dilution.

NOTE: Sample temperature when received at the laboratory was room temperature.

Project Number: TRI02.SFK01
 560
 UST Closure/Assessment
 Work Order Number: X2-11-397
 Date Reported: 12-03-92

Table 1
ANALYTICAL RESULTS
Metals in Water^a

GTEL Sample Number			01	02	03	04
Client Identification			A-1	A-2	A-3	A-4
Date Sampled			11-18-92	11-18-92	11-18-92	11-18-92
Date Digested			11-30-92	11-30-92	11-30-92	11-30-92
Date Analyzed			12-01-92	12-01-92	12-01-92	12-01-92
Analyte	Method	QL,* ug/L	Concentration, ug/L			
Cadmium	EPA 6010	5	<5	<5	<5	<5
Chromium	EPA 6010	10	33	<10	<10	<10
Lead	EPA 7421	5	<5	<5	<5	<5

GTEL Sample Number			05	06	07	
Client Identification			A-5	EB 1118	FB 1118	
Date Sampled			11-18-92	11-18-92	11-18-92	
Date Digested			11-30-92	11-30-92	11-30-92	
Date Analyzed			12-01-92	12-01-92	12-01-92	
Analyte	Method	QL,* ug/L	Concentration, ug/L			
Cadmium	EPA 6010	5	<5	<5	<5	
Chromium	EPA 6010	10	<10	<10	<10	
Lead	EPA 7421	5	<5	<5	<5	

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Digestion by Method 3010/3020.

* Quantitation Limit.

NOTE: Sample temperature when received at the laboratory was room temperature.

GTEL Wichita, KS
211397.MET



Project Number: TRI02.SFK01
560
UST Closure/Assessment
Work Order Number: X2-11-397
Date Reported: 12-03-92

Table 1

ANALYTICAL RESULTS

Inorganics in Water

GTEL Sample Number		01	02	03	04	05
Client Identification		A-1	A-2	A-3	A-4	A-5
Date Sampled		11-18-92	11-18-92	11-18-92	11-18-92	11-18-92
Date Analyzed		11-19-92	11-19-92	11-19-92	11-19-92	11-19-92
Analyte	Method	QL* & Units	Concentration			
pH	EPA 150.1	NA	7.1a	7.0a	7.0a	6.8a
						6.9a

* Quantitation Limit.

a Data represents the concentration of the sample when analyzed. The method for this analyte requires that it be analyzed immediately upon sampling.

NA Not applicable

NOTE: Sample temperature when received at the laboratory was room temperature.

GTEL Wichita, KS
211397.INO

 GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Project Number: TRI02.SFK01
560
UST Closure/Assessment
Work Order Number: X2-11-397
Date Reported: 12-04-92

Table 1
ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Mineral Spirits in Water
GC/FID EPA Method 8015 Modified^a

Sample Identification		Date Sampled	Date Extracted	Date Analyzed	Concentration, ug/L	Detection Limit, ug/L
GTEL No.	Client ID					
01	A-1	11-18-92	11-23-92	12-04-92	<90	90
02	A-2	11-18-92	11-23-92	12-04-92	460	90
03	A-3	11-18-92	11-23-92	12-04-92	640	90
04	A-4	11-18-92	11-23-92	12-04-92	5200	90
05	A-5	11-18-92	11-23-92	12-03-92	<90	90
06	EB-1118	11-18-92	11-23-92	12-03-92	<90	90
07	FB-1118	11-18-92	11-23-92	12-03-92	<90	90

^a ASTM Method D3328(modified) is used for qualitative identification of fuel patterns. The method has been modified to include quantitation by applying calibration and quality assurance guidelines outlined in EPA's publication, Test Methods For Evaluating Solid Waste, SW846, Third Edition, Revision 0, November 1986. Extraction by EPA Method 3510.

NOTE: Sample temperature when received at the laboratory was room temperature.

ATTACHMENT B

OPERATING RECORDS
SOIL VAPOR EXTRACTION SYSTEM
PARTIAL FACILITY CLOSURE
SAFETY-KLEEN CORP.
WICHITA, KANSAS

Safety-Kleen Corp. Branch Service Center
Wichita, Kansas

SVES Field Measurements (Daily) Page 1

Site	Time	Inlet Temp. (°F)	Inlet Vacuum (in-H ₂ O)	Δ Pressure (in-H ₂ O)	Effluent Pressure (psi)	Effluent Temp. (°F)	Flow Calculations (cfm)	Stack Emissions w/ P10 (ppm)	Remarks
7/91	8:30	69	21	0.45	0	90	—	—	Commence full-scale operation
	8:45	69	21	0.445	0	92	498	772	
	9:30	70	23	0.44	0	95	497	744	Laboratory sample
	10:30	70	23	0.44	0	97	497	690	
	12:00	72	23	0.45	0	97	498	911	
	14:00	72	23	0.44	0	97	498	724	
	16:00	72	23	0.435	0	97	495	1340	
	18:00	71	23	0.435	0	96	495	1414	
28/91	7:00	69	23	0.42	0	93	485	801	
	9:30	70	23	0.425	0	94	489	991	Laboratory sample
	11:00	68	23	0.42	0	93	485	1002	
	15:15	70	23	0.425	0	94	489	800	
	17:00	69	23	0.425	0	93	488	793	
2/29/91	10:00	64	23	0.44	0	88	846		Laboratory Sample.
	13:00	66	21	0.47	0	90	757		
12-91	4:00	50	Ø	Ø	Ø	50			Found unit off drained water approx 16gal
12-91	4:20	50	25	47	Ø	70			2nd reading after draining
13-91	8:05am	50	25	Ø	Ø	80			* First look read 0 couple seconds later 0.44
14-91	8:15am	60	21	0.44*	0	70			shot off unit - drained off 5 1/2 gal after - 0.44 after draining
5-91	10:50am	60	21.5	.45	0	85			
8-91	5:50pm	60	29	Ø	Ø	85			drained 10 1/2 gallons water
9-91	6:10pm	59	30	.40	Ø	85			
20-91	7:pm	58	30	.40	Ø	85			
21-91	5pm	58	30	.40	Ø	85			
12-21-91	6:00pm	52	30	Ø	Ø	80			reading before pumping draining
25-91	11:mn	51	24.9	.42	Ø	75			12 gal left - 2nd reading after
		51	25	.44	Ø	75			
26-91	9Am	51	26	.42	Ø	80			
20-91	9:50am	42	22	.44	Ø	60			Discovered unit off drained off 2 1/2 gal

* To be measured periodically by Trittydro Corporation personnel

Safety-Kleen Corp. Branch Service -
Wichita, Kansas

SVES Field Measurements (Daily) Page 2

Date	Time	Inlet Temp. (°F)	Inlet Vacuum (in-H ₂ O)	Δ Pressure (in-H ₂ O)	Effluent Pressure (psi)	Effluent Temp. (°F)	Flow Calculation (cfm)	Stack & Emissions w/ PID (ppm)	Remarks
1-2-91	7:30A	50°	26	45	Ø	75°			
1-3-91	7:00	50°	26	45	Ø	75°			
1-4-91	7:00	50°	26	43	Ø	75°			
1-5-91	6:00	50°	26	43	Ø	75°			
1-6-91	6:00	50°	26	Ø	Ø	75°			
1-9-91	13:10	59°	23	45	-Ø	70°	173		Sys. was down when THC arrived.
1-10-91	12:45	52°	24	45	Ø	80°			DISCONNECTED UNIT OFF
1-11-91	12:35	51°	24	43	Ø	80°			DRAINED 14 gal of water
1-12-91	11:15	52°	23	45	Ø	80°			
1-13-91	11:00	54°	26	42	Ø	80°			2 1/2 gal wtr drained off
1-16-91	11:00	50°	24	44	Ø	80°			
1-17-91	12:00	50°	26	44	Ø	75°			
1-18-91	11:00	50°	26	44	Ø	75°			
1-19-91	11:00	50°	28	41	Ø	75°			
1-20-91	11:00	49°	30	40	Ø	75°			DRAINED 2 1/2 gal
1-26-91	8:00AM	45°	26	43	Ø	60°			DISCONNECTED UNIT OFF
1-27-91	2:00	50°	28	41	Ø	65°			DRAINED 9 3/4 gal } 12-26
1-30-91	11:30	50°	26	42	Ø	75°			DRAINED 5 1/4 gal
2-3-91	11:25	50°	28	41	Ø	80°			
2-3-91	9:00	50°	30	40	Ø	80°			
2-6-91	11:00	50°	30	41	Ø	75°			DRAINED 6 1/2 gal of water
2-7-91	11:00	50°	30	39	Ø	80°			
2-8-91	12:00	50°	30	46	Ø	75°			DRAINED 1 gal of water
2-9-91	11:00	49°	30	41	Ø	75°			
2-10-91	12:55PM	50°	30	41	Ø	75°			
2-13-91	10:30	48°	30	46	Ø	75°			
2-14-91	10:00	46°	30	40	Ø	75°	87		DRAINED 5 3/4 gal of water
2-15-91	13:00	47°	29	0.42	0	75°			

* To be measured periodically by Trittydro Corporation personnel

Safety-Kleen Corp. Branch Service Center
Wichita, Kansas

SVES Field Measurements (Daily) Page _____

Date	Time	Inlet Temp: (°F)	Inlet Vacuum (in-H ₂ O)	Δ Pressure (in-H ₂ O)	Effluent Pressure (psi)	Effluent Temp (°F)	Film Calculation (cfm)	Stack Emissions cu. ft./hr. (mm)	Remarks
-16-92	11:30AM	45°	29	42	Ø	75°			DRAINED 3 1/2 GALS.
-17-92	1:00PM	45°	29	43	Ø	75°			DRAINED 4 GALS
20-92	11:00	45°	30	40	Ø	75°			
21-92	1:30PM	45°	30	40	Ø	75°			
22-92	1:30PM	45°	32	38	Ø	75°			
23-92	6:00PM	45°	30	40	Ø	75°			
24-92	6:00PM	46°	30	40	Ø	75°			
27-92	11:00	50°	36	35	Ø	80°			
19-92	2:30	50°	34	37	Ø	80°			DRAINED 3 gal. of water
29-92	5:10P	50°	39	35	Ø	80°			
30-92	8:10A	50°	38	36	Ø	85°			
-31-92	12:30P	50°	38	35	Ø	85°			
-3-92	1:00	50°	38	35	Ø	90°			
2-4-92	11:00	50°	38	35	Ø	85°			No water to drain
2-5-92	4:00	50°	36	36	Ø	85°			No water to drain
2-6-92	11:00	50°	36	36	Ø	85°			No water to drain
2-7-92	4:30	50°	36	36	Ø	85°			No water to drain
2-10-92	9:00	49°	34	37	Ø	80°			
2-11-92	10:00	49°	34	38	Ø	80°			No water to drain
2-12-92	10:00	49°	34	36	Ø	80°			
2-13-92	5:00	49°	34	36	Ø	80°			
2-14-92	12:00	49°	34	36	Ø	80°			
2-17-92	11:00	50°	36	36	Ø	85°			
2-18-92	9:15AM	49°	36	36	Ø	80°			
2-19-92	5:30	50°	36	36	Ø	85°			
2-20-92	10:25	50°	36	37	Ø	85°			
2-21-92	4:30	53°	36	36	Ø	90°			
2-24-92	4:00	50°	36	36	Ø	85°			

* To be measured periodically by Trittydro Corporation personnel

Safety-Kleen Corp. Branch Service Center
Wichita, Kansas

SVES Field Measurements (Daily) Page _____

Date	Time	Inlet Temp. (°F)	Inlet Vacuum (in-H ₂ O)	Δ Pressure (in-H ₂ O)	Effluent Pressure (psi)	Effluent Temp. (°F)	Flow Calculation (cfm)	Stack Emissions w/ P10 (cfm)	Remarks
25-92	11:00	50°	36	37	Ø	85°			
26-92	11:15	50°	36	37	Ø	85°			
27-92	9:35	50°	36	37	Ø	85°			
28-92	11:00	50°	36	37	Ø	85°			
29-92	11:15	55°	36	37	Ø	95°			
3-92	11:45	55°	36	37	Ø	95°			
4-92	1:35	55°	36	35	Ø	95°			
5-92	3:00	55°	36	35	Ø	95°			No water to draw
6-92	3:11:18	55°	36	35	Ø	95°			
7-92	1:15	54°	36	35	Ø	90°			
3-10-92	10:00	54°	36	35	Ø	90°			
2-11-92	11:00	58°	36	36	Ø	85°			
2-12-92	4:00	58°	36	36	Ø	85°			
3-13-92	10:00	53°	36	37	Ø	90°			No to draw (Faded)
3-16-92	12:00	54°	34	36	Ø	95°			
3-17-92	11:00	55°	34	36	Ø	95°			
3-18-92	12:45	55°	34	36	Ø	95°			
3-19-92	1:15	55°	34	36	Ø	90°			
3-20-92	10:45	52°	38	36	Ø	90°			
2-23-92	10:00	52°	38	36	Ø	90°			
3-24-92	1:00	52°	38	36	Ø	90°			
3-25-92	10:00	52°	36	36	Ø	90°			
3-26-92	7:00pm	52°	36	36	Ø	90°			
3-27-92	11:00pm	52°	36	36	Ø	90°			
3-30-92	12:00pm	54°	38	37	Ø	90°			
3-31-92	11:30pm	54°	38	37	Ø	90°			
4-1-92	11:00pm	52°	36	37	Ø	85°			
4-2-92	11:00pm	52°	36	37	Ø	85°			

* To be measured periodically by Trithydro Corporation personnel

Safety-Kleen Corp. Branch Service Center
Wichita, Kansas

SVES Field Measurements (Daily) Page _____

Date	Time	Inlet Temp. (°F)	Inlet Vacuum (in-H ₂ O)	Δ Pressure (in-H ₂ O)	Effluent Pressure (psi)	Effluent Temp. (°F)	Fiber Calculation (cfm)	Stack Emissions w/ P10 (cfm)	Remarks
1-3-92	3:30p	52°	36	.35	Ø	90°			
1-6-92	11:40am	55°	36	.36	Ø	95°			
1-7-92	5:00pm	55°	36	.36	Ø	95°			
1-9-92	3:00pm	55°	36	.36	Ø	95°			
1-9-92	9:30am	55°	36	.37	Ø	95°			
1-10-92	1:25p	55°	36	.38	Ø	100°			No fiber 0 rpm
1-13-92	11:00am	55°	36	.38	Ø	100°			
1-14-92	11:00am	58°	36	.37	Ø	100°			No water to DRAIN
1-15-92	11:00am	58°	36	.36	Ø	100°			
1-16-92	10:30am	58°	36	.36	Ø	100°			
1-17-92	HOL	5	D	A	4				
1-20-92	55°	36	35	Ø					
1-20-92	10:30p	55°	39	.35	Ø	95°			
1-21-92	11:00am	55°	38	.35	Ø	95°			
1-22-92	9:00am	55°	38	.36	Ø	90°			
1-23-92	11:00am	56°	38	.36	Ø	95°			
1-24-92	10:30am	36°	38	.36	Ø	95°			
1-27-92	10:05am	55°	36	.37	Ø	95°			
1-28-92	8:00pm	55°	36	.37	Ø	95°			
1-29-92	8:05pm	55°	36	.37	Ø	95°			
1-30-92	11:30pm	60°	37	.35	Ø	100°			
2-1-92	10:00pm	60°	38	.36	Ø	100°			
2-2-92	12:00am	60°	37	.36	Ø	105°			
2-5-92	3:00pm	60°	37	.36	Ø	105°			
2-6-92	11:00pm	60°	37	.37	Ø	100°			
2-7-92	11:00pm	60°	37	.36	Ø	100°			
2-8-92	11:20pm	60°	37	.36	Ø	100°			
2-9-92	11:45pm	60°	37	.36	Ø	100°			

* To be measured periodically by Trittydro Corporation personnel

SEP 17 '92 13:54

FROM SAFETY-KLEEN 6-195-01

PAGE .005

Safety-Kleen Corp. Branch Service Center
Wichita, Kansas

SVES Field Measurements (Daily) Page _____

Date	Time	Inlet Temp. (°F)	Inlet Vacuum (in-H ₂ O)	Δ Pressure (in-H ₂ O)	Effluent Pressure (psi)	Effluent Flow Temp. (°F)	Stack Emissions Calculation w/ P10 (cfm)	Stack Emissions (cfm)	Remarks
5-12-92	100pm	60°	37	35	Ø	105°			
5-13-92	110am	60°	37	35	Ø	100°			No water to DRAIN
5-11-92	1145AM	60°	37	36	Ø	100°			
5-15-92	120pm	75	38	35	Ø	110°			
5-18-92	110am	SYS1 EM	Shot Down	By TRY HYDRO					
5-19-92	10am	Systm shot down	By TRY HYDRO						
5-20-92	10am	Systm shot down	By TRY HYDRO						
5-21-92	10am	Systm shot down	By TRY HYDRO						
5-22-92	10am	60°	50	25	Ø	105°			
5-25-92	100pm	100							
5-26-92	110am	68°	36	25	Ø	110°			
5-27-92	120pm	57°	36	25	Ø	105°			
5-28-92	120pm	60°	36	25	Ø	105°			
5-29-92	1115AM	60°	52	25	Ø	120°			
6-1-92	120pm	60°	52	25	Ø	110°			
6-2-92	100pm	60°	52	25	Ø	110°			
6-3-92	110am	60°	51	24	Ø	120°			
6-4-92	120pm	60°	51	24	Ø	120°			
6-5-92	110am	60°	51	24	Ø	120°			
6-8-92	1130AM	60°	51	24	Ø	120°			
6-9-92	120pm	60°	51	24	Ø	120°			
6-10-92	120pm	70°	51	25	Ø	125°			
6-11-92	120pm	70°	51	25	Ø	125°			
6-12-92	1130PM	70°	51	25	Ø	120°			3 1/2 GAL of water
6-13-92	1130AM	70°	50	27	Ø	100°	16 gallons		System shutdown
6-16-92	1115AM	85°	50	29	Ø	100°	32-911one		System shutdown
6-16-92	—	—	—	—	—	—	—	—	Called Tom Madsen 6-16-92
									Drain tank 4 days

* To be measured periodically by Trithydro Corporation personnel

Safety-Kleen Corp. Branch Service Center
Wichita, Kansas

SVES Field Measurements (Daily) Page _____

Date	Time	Inlet Temp. (°F)	Inlet Vacuum (in-H ₂ O)	Δ Pressure (in-H ₂ O)	Effluent Pressure (psi)	Effluent Temp. (°F)	Flow Calculus (cfm)	Stack Emissions w/ P10 (cfm)	Remarks
6-17-92	100 pm	85°	50	29	Q	100°			System shut down 32 gal of water
6-18-92	100 pm	85°	50	30	Q	95°			32 gal of water system down
6-19-92	11:15 am	85°	50	30	Q	95°			32 gal of water
6-22-92	1:00 PM	70°	51	25	Q	125°			48 gal of water
6-23-92	1:00 PM	72°	51	24	Q	125°			55 gal of water system down
6-24-92	1:40 PM	72°	50	96	Q	125°			48 gal of water
6-25-92	11:15 am	71°	49	27	Q	105°			15 min - regal 32 gal of water
6-26-92	11:15 AM	72°	44	30	Q	100°			32 gal
6-27-92	11:30 AM	73°	33	37	Q	100°			8 gal
6-29-92	11:30 AM	74°	32	38	Q	101°			
7-1-92	1:15 PM	80°	32	38	Q	102°			
7-2-92	1:30 PM	81°	31	38	Q	103°			
7-3-92	11:45 AM	84°	31	38	Q	105°			
7-7-92	11:45 AM	82°	22	35	Q	105°			
7-8-92	11:45 AM	73°	32	36	Q	105°			
7-9-92	11:30 AM	73°	31	37	Q	105°			
7-10-92	1:20 PM	82°	32	36	Q	105°			
7-13	11:30 AM	82°	32	37	Q	105°			
7-14	11:30 AM	80°	32	35	Q	105°			
7-15	11:40 AM	82	32	35	Q	105°			
7-16	11:20 AM	80°	32	37	Q	100°			3 gal.
7-17	11:30 AM	79°	33	35	Q	105°			
7-20	11:30 AM	80°	32	37	Q	105°			
7-21	12:00 PM	80°	33	35	Q	105°			
7-22	11:15 AM	80°	33	35	Q	105°			
7-23	12:00 PM	80°	32	35	Q	105°			
7-24	12:00 PM	80°	33	37	Q	105°			

* To be measured periodically by Trittydro Corporation personnel

Wichita, KS
Sues Field Measurements (Daily)

Date	Time	Inlet Temp. (°F)	Inlet vacuum (in-H2O)	A pressure (in-H2O)	Effluent pressure (PSI)	Inlet Temp. (°F)	Flow calculation (CFM)	Stock emissions w/PID (ppm)	Remarks
7-27	1:50 AM	82°	26	35	Q	107°			Q
28	1:20 AM	85°	27	35	Q	105°			Q
29	1:40 AM	85°	26	35	Q	105°			Q
30	1:15 AM	92°	27	35	Q	105°			Q
31	1:40 AM	89°	26	35	Q	103°			Q
1	1:55 AM	82°	26	35	Q	105°			Q
2	10:15 AM	82°	26	35	Q	102°			Q
3	11:55 AM	82°	27	35	Q	103°			Q
4	11:30 AM	80°	30	38	Q	105°			Q
5	1:45 PM	80°	39	35	Q	105°			Q
6	1:30 PM	80°	39	35	Q	105°			Q
7	11:35 AM	80°	39	35	Q	105°			Q
10	11:30 AM	83°	31	39	Q	105°			Q
11	11:00	80°	31	36	Q	100°			Q
12	11:40	80°	32	36	Q	105°			Q
13	11:25 AM	81°	31	37	Q	105°			Q
14	11:00 AM	80°	31	37	Q	105°			Q
15	11:45 AM	81°	32	36	Q	105°			Q
16	11:45	80°	33	36	Q	105°			Q
17	2:10 PM	80°	31	37	Q	105°			Q
18	11:30 AM	80°	31	37	Q	105°			Q
19	11:00 AM	80°	31	38	Q	105°			Q
20	11:45 AM	81°	31	39	Q	100°			Q
21	11:30 AM	81°	31	39	Q	105°			Q
22	10:55 AM	81°	31	39	Q	107°			Q
23	9:30 AM	82°	31	38	Q	110°			Q

* To be measured periodically by TritHydro Corporation Personnel

Wichita, KS
SUS Field Measurements (Daily)

Date	Time	Inlet Temp (°F)	Inlet vacuum (in-H ₂ O)	A pressure (in-H ₂ O)	Effluent Pressure (PSI)	Effluent Temp. (°F)	Flow calculated (CFM)	Stack emissions (ppm)	Remarks
9-92	2:10pm	81°	31	38	Q	105°			Q
15-92	1:55pm	79°	31	37	Q	101°			Q
21-92	2:10pm	79°	30	36	Q	101°			Q
27-92	2:00pm	81°	30	36	Q	101°			Q
28-92	10:45AM	80°	30	36	-	101°			-
29-92	6:15PM	78°	30	35	-	101°			-
30-92	6:15PM	78°	30	35	-	101°			-
1-92	2:00pm	82°	30	37	Q	101°			Q
1-92	2:00pm	81°	30	36	Q	101°			Q
2-92	8:30pm	82°	50	36	Q	101°			Q
-92	5:00pm	83°	30	36	Q	101°			Q
1-92	2:00pm	82°	30	36	Q	101°			Q
1-92	1:00pm	82°	30	36	Q	101°			Q
1-92	11:00AM	83°	31	36	Q	101°			Q
1-92	2:30pm	83°	31	36	Q	101°			Q
6-92	2:40PM	79°	31	34	Q	101°			Q
7-92	2:00PM	83°	30	37	Q	101°			Q
0-92	2:10PM	83°	30	37	Q	101°			Q
11-92	2:00PM	80°	30	38	Q	101°			Q
12-92	2:15PM	81°	30	38	Q	104°			Q
3-92	9:30AM	80°	30	38	Q	103°			Q
4-92	1:15PM	81°	30	35	Q	102°			Q
5-92	2:00PM	80°	30	36	Q	101°			Q
6-92	3:15PM	82°	31	38	Q	101°			Q

* To be measured periodically by TriHydro Corporation Personnel

37-4-1-92

DEC 30 '92 14:56

FROM SAFETY-KLEEN 6-195-01

PAGE .004

Wichita, KS
Sues Field Measurements (Daily)

Site	Time	Inlet Temp (OF)	Inlet vacuum (in-H2O)	A Pressure (in-H2O)	Effluent pressure PSI	Effluent Temp. (OF)	Flow calculation (CFM)	Stack emissions (w/PID) (ppm)	Remarks
-17-92	2:00pm	82°	30	37	Q	102°	Q		
-18-92	2:00pm	74°	30	37	Q	100°	Q		
-19-92	11:00AM	71°	29°	37	Q	99°	Q		
-20-92	10:30AM	80°	30	31	Q	108°	Q		
-21-92	2:00PM	74°	31	37	Q	104°	Q		
-22-92	2:00PM	75°	31	37	Q	104°	Q		
-23-92	2:00PM	73°	29	40	Q	100°	Q		
-24-92	2:30PM	73°	30	39	Q	100°	Q		
-25-92	2:00PM	73°	29	40	Q	100°	Q		
-26-92	9:45AM	72°	29	39	Q	99°	Q		
-27-92	10:00AM	70°	29	39	Q	99°	Q		
-28-92	2:00PM	72°	31	39	Q	100°	Q		
-29-92	2:00PM	72°	31	40	Q	99°	Q		
-30-92	2:00PM	73°	31	39	Q	100°	Q		
-31-92	2:30PM	73°	31	40	Q	101°	Q		
-1-92	1:00PM	73°	30	40	Q	100°	Q		
-2-92	1:00PM	73°	30	40	Q	100°	Q		
-3-92	11:30AM	73	30	40	Q	101°	Q		
-4-92	11:45	72°	30	39	Q	100°	Q		
-5-92	2:10PM	72°	30	40	Q	100°	Q		
-6-92	2:05PM	72°	31	40	Q	100°	Q		
-7-92	2:00PM	71°	31	38	Q	100°	Q		
-8-92	1:45PM	71°	31	36	Q	99°	Q		
-9-92	3:00PM	63°	27	35	Q	99°	Q		
-10-92	6:30PM	68°	28	36	Q	99	Q		
-11-92	4:30PM	69°	27	36	Q	99	Q		
-12-92	9:30AM	64°	31	37	Q	98	Q		

* To be measured periodically by TritHydro Corporation Personnel

Wichita, KS
SUES Field Measurements (Daily)

Date	Time	Inlet Temp (°F)	Inlet volume (m-H ₂ O)	A Pressure (in-H ₂ O)	Effluent pressure PSI	Effluent Temp. (°F)	Flow calculation (CFM)	Stack emissions (ppm) w/PID	Remarks
0-12-92	2:05pm	70°	32	38	Q	100°			
0-13-92	9:36am	70°	32	38	Q	100°			
0-14-92	1:55pm	72°	31	39	Q	100°			
0-15-92	2:30pm	70°	32	36	Q	100°			
0-16-92	2:00pm	63°	31	37	Q	99°			
0-17-92	10:20pm	60°	31	37	Q	99°			
0-18-92	1:10pm	60°	31	33	Q	99°			
0-19-92	2:00pm	62°	32	36	Q	99°			
0-20-92	3:30pm	64°	32	37	Q	99°			
0-21-92	2:00pm	70°	32	37	Q	100°			
0-22-92	1:55pm	70°	32	38	Q	100°			
0-23-92	1:50pm	71°	32	37	Q	100°			
0-25-92	10:00	70°	31	37	Q	99°			
0-26-92	2:05pm	70°	32	36	Q	99°			
0-27-92	2:00pm	69°	32	37	Q	99°			
0-28-92	3:00pm	70°	32	35	Q	99°			
0-29-92	2:00pm	61°	38	33	Q	99°			
0-30-92	2:00pm	60°	36	34	Q	98°			
0-31-92	10:30	59°	39	33	Q	97°			
0-31-92	2:00pm	59°	38	34	Q	97°			
1-2-92	2:00pm	60°	38	35	Q	98°			
1-3-92	2:00pm	60°	38	35	Q	99°			
1-4-92	2:00pm	60°	38	35	Q	99°			
1-5-92	2:40pm	60°	37	36	Q	100°			
1-6-92	4:30pm	50°	37	36	Q	99°			
1-6-92	10:00AM	50°	37	36	Q	99°			
1-8-92	10:00am								

* To be measured periodically by TriHydro Corporation Personnel

DEC 30 '92 14:55

FROM SAFETY-KLEEN 6-195-01

PAGE . 002 .

Wichita, KS
SUS Field Measurements (Daily)

Date	Time	Inset Temp (°F)	Inset volume (m-H ₂ O)	In Pressure (in-H ₂ O)	Effluent Pressure (PSI)	Effluent Temp. (OF)	Flow calculation (CFM)	Stack emissions (w/PID (ppm))	Remarks
1-7-92	3:40pm	47°	38	34	Q	96°	Q		6 gallons water
2-8-92	2:20pm	47°	32	36	Q	70°			7 gallons
2-9-92	2:20pm	46°	33	36	Q	75°			Q
2-10-92	3:30pm	47°	33	36	Q	75°			Q
2-11-92	3:00pm	47°	33	36	Q	75°			Q
2-12-92									
2-13-92									
2-14-92	3:10pm	48°	32	36	Q	73°			7 gallons water
2-15-92	3:20pm	48°	32	36	Q	73°			Q
2-16-92	2:00pm	42°	32	35	Q	71°			5 1/2 gallons water
2-17-92	2:15pm	41°	38	34	Q	62°			2 1/2 water
2-18-92	2:20pm	42°	39	34	Q	71°			2 water
2-21-92	9:30pm	42°	39	34	Q	71°			4 gal water
2-22-92	2:30pm	42°	39	34	Q	71°	Q		Q
2-23-92	9:00pm	42°	32	34	Q	71°			Q
2-24-92	5:00pm	41°	38	34	Q	71°			Q
2-25-92	4:45pm	41°	38	34	Q	71°			Q
2-26-92	4:00pm	41°	38	34	Q	71°			Q
2-27-92	5:30pm	40	38	34	Q	71°			
2-28-92	2:00pm	42°	39	34	Q	71°			
2-29-92	4:00pm	42°	39	34	Q	71°			Q

* To be measured periodically by TritHydro Corporation Personnel

ATTACHMENT C

SUMMARY OF SVES PERFORMANCE
SAFETY-KLEEN CORP. SERVICE CENTER
WICHITA, KANSAS

Table C-1. Summary SVES Emissions, Total VOCs Removal, Safety-Kleen Corp. Service Center, Wichita, Kansas.

Sample Date/Time	Total VOCs ¹ (mg/Kg)	Average Flow Rate ² (scfm)	Average Removal Rate ³ (lb/hr)	Incremental Total Removed (lb)	Accumulated Total Removed (lb)
10-27-91/9:30	1209	441	2.40	--	--
10-28-91/9:30	1183	441	2.35	57	57
10-29-91/10:00	976	441	1.94	53	110
1-16-92/11:45	82	438	0.16	819 ⁴	929
5-18-92/9:00	128	391	0.23	575	1,504
5-21-92/16:00	121	331	0.18	0 ⁵	1,504
8-24-92/16:00	11	399	0.02	285	1,789
11-17-92/17:15	5	390	0.01	29	1,818
11-19-92/16:30	12	370	0.02	0 ⁵	1,818

Note:

¹ Mineral spirits was the only volatile organic compound (VOC) detected in the vapor samples analyzed by Method 8260 (USEPA SW-846).

² Average flow rates are based on standard conditions.

³ Average removal rates are based on the density of air at standard conditions (0.075 lb/ft³).

⁴ The incremental removal during the quarter period was estimated based on a typical time versus removal curve for a soil vapor extraction system.

⁵ The system was shut down as part of a semiannual soil gas survey to evaluate the performance of the system.

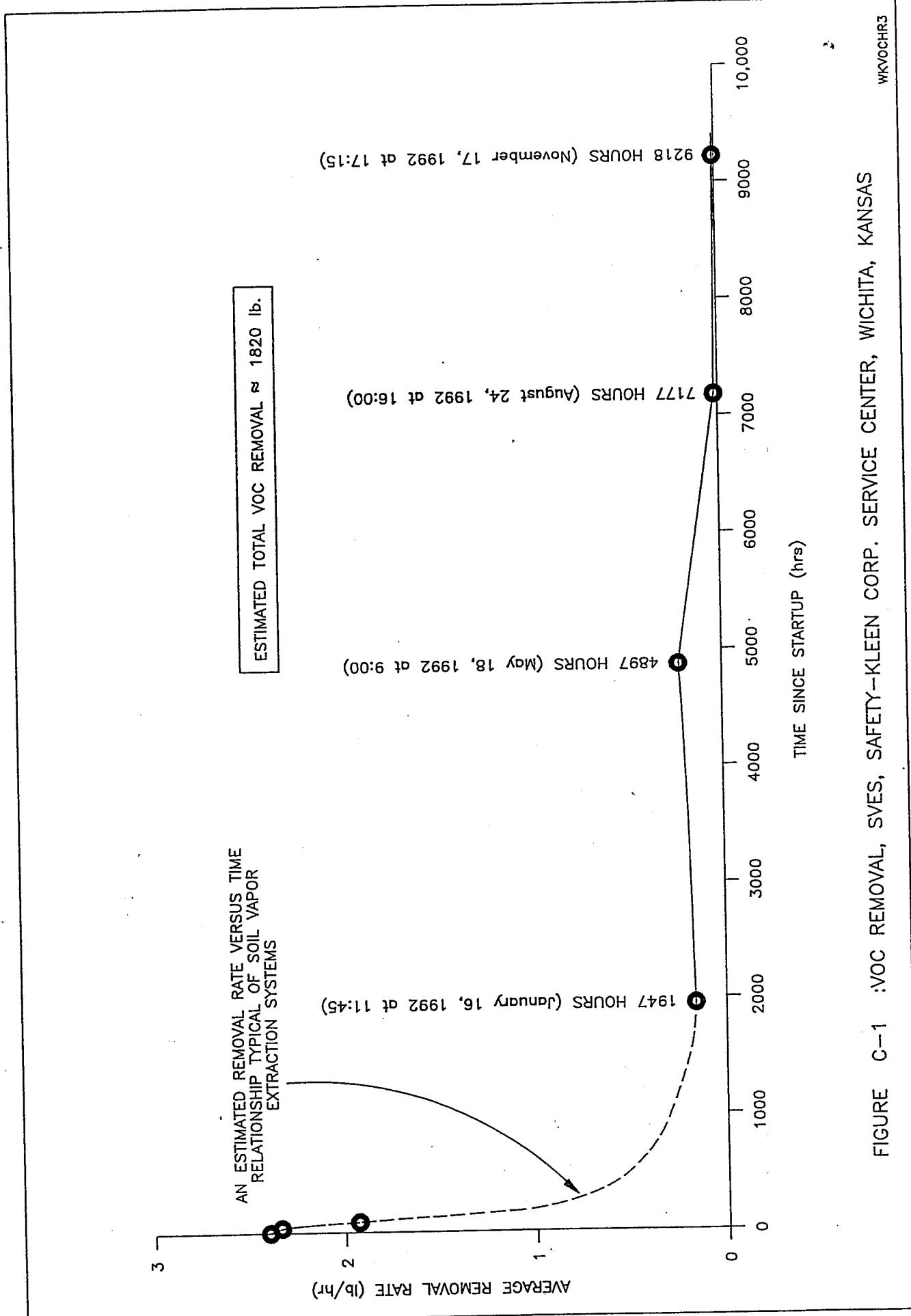


FIGURE C-1 :VOC REMOVAL, SVES, SAFETY-KLEEN CORP. SERVICE CENTER, WICHITA, KANSAS

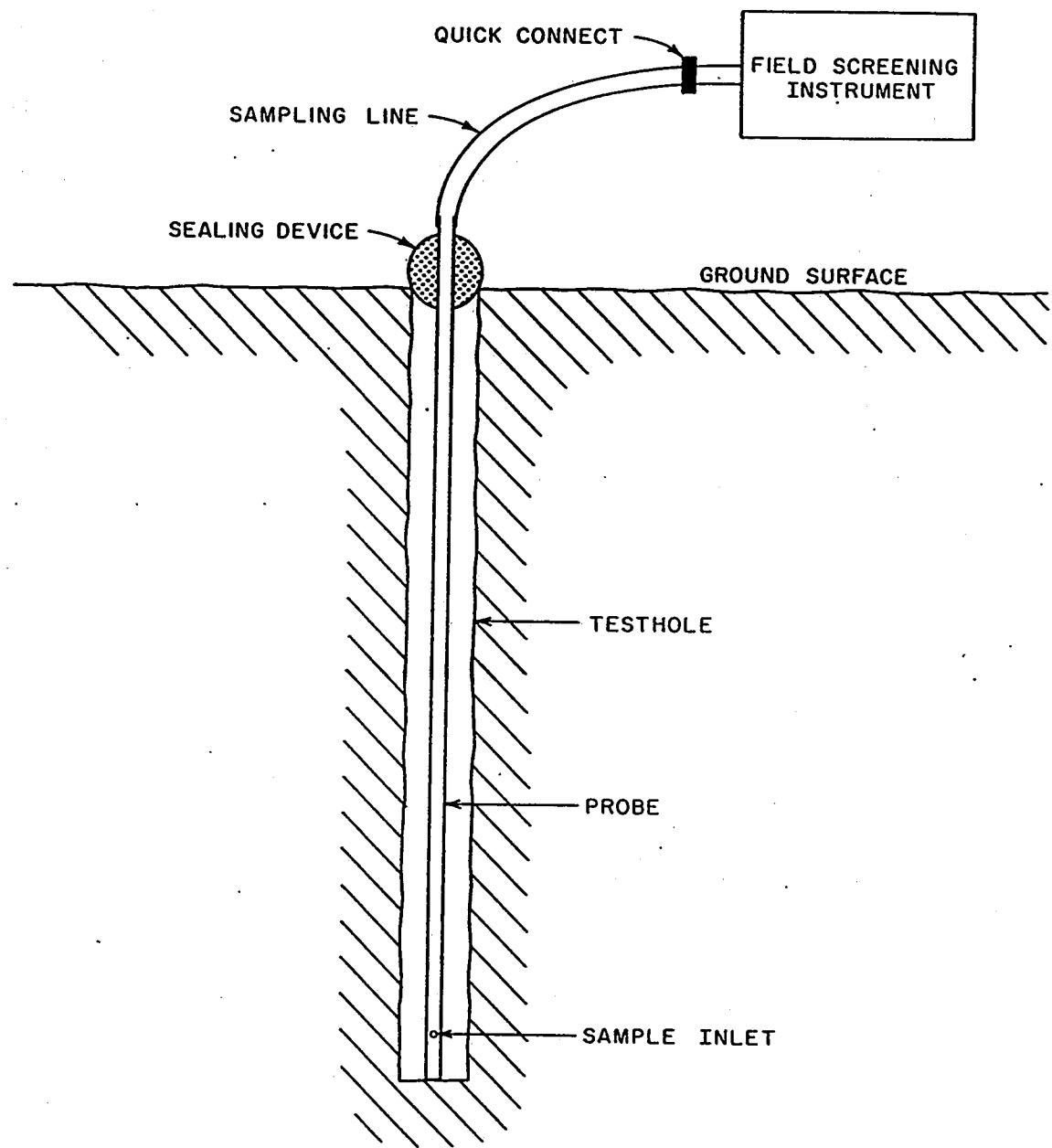
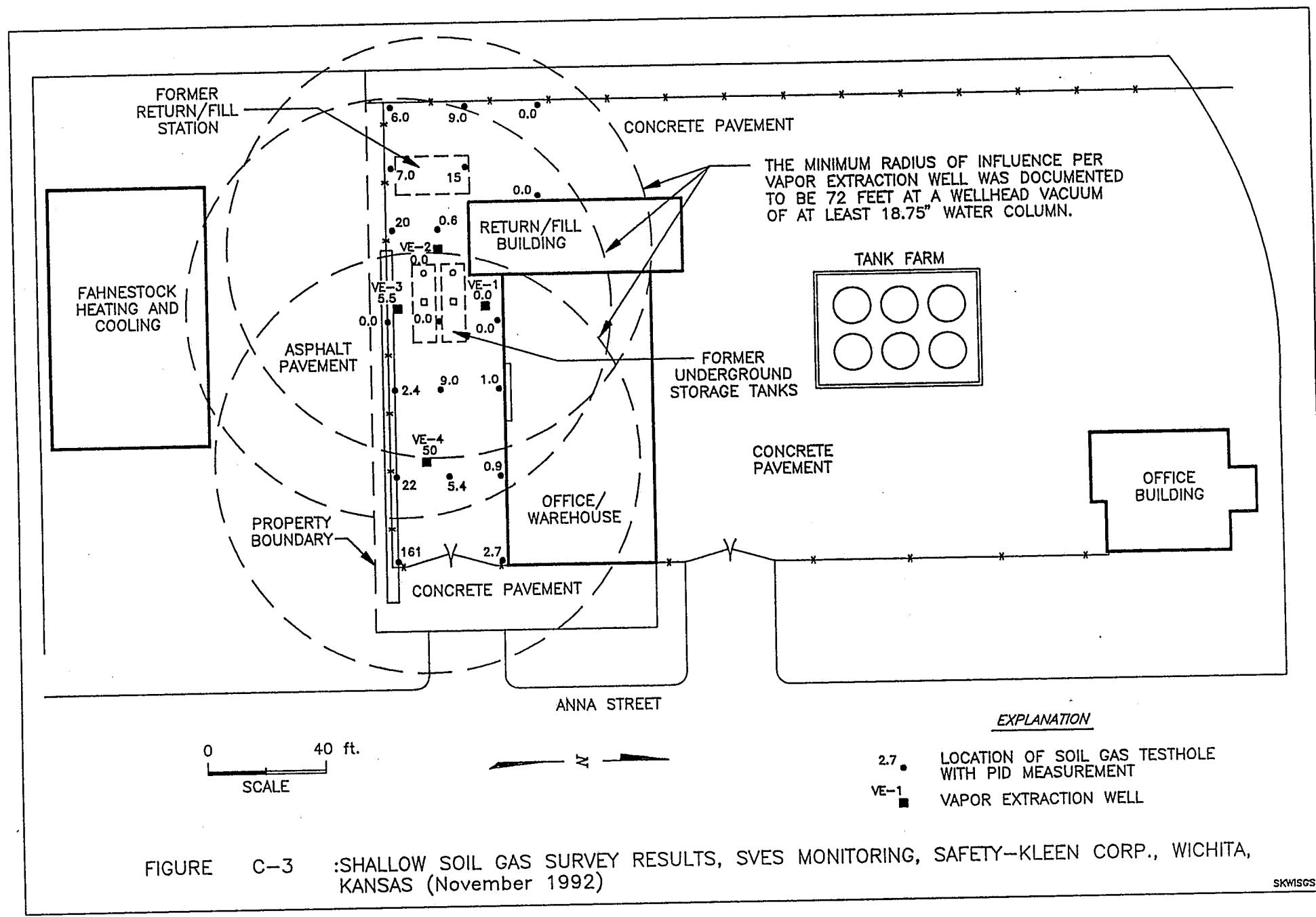


FIGURE C-2 : SCHEMATIC DIAGRAM OF SOIL GAS SAMPLING EQUIPMENT,
SAFETY KLEEN CORP., WICHITA, KANSAS



R. V. FITZSIMMONS AND ASSOC. INC.
CHEMICAL ANALYSTS AND CONSULTANTS

1860 Arthur Drive
 West Chicago, Illinois 60185
 (708) 231-0680
 FAX: (708) 231-0811

ANALYSIS REPORT FOR:

TRIHYDRO CORPORATION
 • 920 Sheridan Street
 Laramie, WY 82070
 Attn: Jack Bedessem/Tom Madsen

PURCHASE ORDER NO.

123201

TriHydro Proj. # 560

DATE

11 / 25 / 92

REPORT OF SAMPLES ANALYSIS: Analysis of two stack samples from Safety-Kleen Corp., Wichita, Kansas for mineral spirits and volatile organic compounds (VOCs) content.
 Samples collected by TriHydro Corporation.

METHODS: SW-846 Method 8260 -- Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry (GC/MS): Capillary Column Technique Direct Injection from Tedlar bag.

RESULTS:

Compound	ES-1 17:15 11/17/92	ES-1A 16:30 11/19/92
Benzene	< 2 mg/kg	< 2 mg/kg
Bromodichloromethane	< 2 mg/kg	< 2 mg/kg
Bromoform	< 2 mg/kg	< 2 mg/kg
Carbon Disulfide	< 2 mg/kg	< 2 mg/kg
Carbon Tetrachloride	< 2 mg/kg	< 2 mg/kg
Chlorobenzene	< 2 mg/kg	< 2 mg/kg
Chloroform	< 2 mg/kg	< 2 mg/kg
Dibromochloromethane	< 2 mg/kg	< 2 mg/kg
1,4-Dichloro-2-butene	< 2 mg/kg	< 2 mg/kg
1,2-Dichlorobenzene	< 2 mg/kg	< 2 mg/kg
1,3-Dichlorobenzene	< 2 mg/kg	< 2 mg/kg
1,4-Dichlorobenzene	< 2 mg/kg	< 2 mg/kg
1,1-Dichloroethane	< 2 mg/kg	< 2 mg/kg
1,2-Dichloroethane	< 2 mg/kg	< 2 mg/kg
1,1-Dichloroethene	< 2 mg/kg	< 2 mg/kg
trans-1,2-Dichloroethene	< 2 mg/kg	< 2 mg/kg
1,2-Dichloropropane	< 2 mg/kg	< 2 mg/kg
cis-1,3-Dichloropropene	< 2 mg/kg	< 2 mg/kg
trans-1,3-Dichloropropene	< 2 mg/kg	< 2 mg/kg
Ethylbenzene	< 2 mg/kg	< 2 mg/kg

TriHydro Corp.

11-25-92

page 2 of 2

RESULTS: (cont.)

	ES-1 17:15 11/17/92	ES-1A 16:30 11/19/92
Iodomethane	< 2 mg/kg	< 2 mg/kg
Methylene Chloride	< 2 mg/kg	< 2 mg/kg
Mineral Spirits	5 mg/kg	12 mg/kg
Styrene	< 2 mg/kg	< 2 mg/kg
1,1,2,2-Tetrachloroethane	< 2 mg/kg	< 2 mg/kg
Tetrachloroethylene	< 2 mg/kg	< 2 mg/kg
Toluene	< 2 mg/kg	< 2 mg/kg
1,1,1-Trichloroethane	< 2 mg/kg	< 2 mg/kg
1,1,2-Trichloroethane	< 2 mg/kg	< 2 mg/kg
Trichloroethylene	< 2 mg/kg	< 2 mg/kg
Trichlorofluoromethane	< 2 mg/kg	< 2 mg/kg
1,1,2-Trichloro-	< 2 mg/kg	< 2 mg/kg
1,1,2-trifluoroethane	< 2 mg/kg	< 2 mg/kg
Vinyl Chloride	< 2 mg/kg	< 2 mg/kg
<i>c</i> -Xylene	< 2 mg/kg	< 2 mg/kg
<i>m</i> -Xylene	< 2 mg/kg	< 2 mg/kg
<i>p</i> -Xylene	< 2 mg/kg	< 2 mg/kg

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.:	Today's Date:		Date Results Requested:		Analyses Requested													
S60	11-17-92		12-1-92															
Sampler's Name: Tom Madsen			Phone No.: 307-745-7474		Fax No.: 307-745-7729													
Company Name and Address: TriHydro Corporation 920 Sheridan Laramie, WY 82070			Company Contact: Jack Bedessem / Tom Madsen															
Collector's Sample No.	Sample Matrix	Date Sampled/ Time Sampled	No. of Containers															
ES-1	Air/Vapor	11-17-92 / 17:15	1 Tedlar Bag	X X														
Remarks: 1. Volatile organic compounds by USEPA method 8240 or 8260. Should be run out to include dichlorobenzenes 2. Same detection limits as reported in August 1992. 3. Please FAX us a copy of the signed C-O-C. 4. Please return cooler to TriHydro Corporation ASAP.																		
Relinquished by: <i>Tom Madsen</i>	Affiliation: TriHydro Corporation	Date/Time: 11-18-92 / 12:00	Received by: <i>J. M. T.</i>	Affiliation: RV Engineering	Date/Time: 11-17-92 / 10:00 AM													
Relinquished by:	Affiliation:	Date/Time:	Received by:	Affiliation:	Date/Time:													
Relinquished by:	Affiliation:	Date/Time:	Received by:	Affiliation:	Date/Time:													
Were samples received in good condition?		Remarks:																

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Remarks: 1. Volatile organic compounds by USEPA method 8240 or 8260. Should be run out to include dichlorobenzenes.
2. Same detection limits as reported in August 1992.
3. Please FAX us a copy of the signed COC.
4. Please return cooler to THC ASAP.

4. Please return cooler to THC ASAP.					
Relinquished by: <i>Laura H. Madia</i>	Affiliation: Trithydro Corporation	Date/Time: 11-19-92 / 18:30	Received by: <i>J. L. L.</i>	Affiliation: RV Fitness	Date/Time: 11-20-92 / 13:30
Relinquished by:	Affiliation:	Date/Time:	Received by:	Affiliation:	Date/Time:
Relinquished by:	Affiliation:	Date/Time:	Received by:	Affiliation:	Date/Time:
Were samples received in good condition?		Remarks: ---			